Test Plan Document

Template for Quality Assurance

State University of Zanzibar (SUZA)

BSc Computer Science

Document Information

Project Name	[Enter Project Name]
Version	1.0
Date	[Enter Date]
Author(s)	[Team Members]
Reviewed By	[Reviewer Name]

Contents

1 Introduction

1.1 Purpose

This document describes the test plan for [Project Name]. It outlines the testing approach, test items, features to be tested, testing tasks, and resources required.

1.2 Scope

[Define what will and will not be tested.]

In Scope:

Feature 1

Feature 2

Feature 3

Out of Scope:

ct not being tested

1.3 Testing Objectives

1. Verify all functional requirements are implemented correctly
2. Validate non-functional requirements (performance, security)
3. Identify and report defects
4. Ensure system reliability before deployment

2 Test Strategy

2.1 Testing Levels

2.1.1 Unit Testing

- **Objective:** Test individual components/functions
- **Responsibility:** Developers
- **Tools:** Jest, JUnit, pytest, etc.
- **Coverage Target:** 80% minimum

2.1.2 Integration Testing

- **Objective:** Test interactions between components
- **Responsibility:** Developers/QA
- **Approach:** Bottom-up / Top-down / Big Bang

2.1.3 System Testing

- **Objective:** Test the complete integrated system
- **Responsibility:** QA Team
- **Environment:** Staging

2.1.4 User Acceptance Testing (UAT)

- **Objective:** Validate system meets business requirements
- **Responsibility:** End users/Stakeholders
- **Environment:** UAT Environment

2.2 Testing Types

Test Type	Description	Priority
Functional Testing	Verify features work as expected	High
Usability Testing	Evaluate user experience	Medium
Performance Testing	Test response times and load	Medium
Security Testing	Identify vulnerabilities	High
Regression Testing	Ensure changes don't break existing features	High

3 Test Environment

3.1 Hardware Requirements

- Server: [specifications]
- Client: [specifications]

3.2 Software Requirements

- Operating System: [OS]
- Browser: Chrome, Firefox, Safari (latest versions)
- Database: [database name and version]

3.3 Test Tools

Tool	Purpose	Version
Jest/JUnit/pytest	Unit Testing	[version]
Postman	API Testing	[version]
Selenium	UI Automation	[version]
JMeter	Performance Testing	[version]

4 Test Cases

4.1 Test Case Template

Test Case ID	TC-001
Test Title	[Descriptive title]
Module	[Module/Feature name]
Priority	High / Medium / Low
Preconditions	[What must be true before test]
Test Steps	1. Step 1 2. Step 2 3. Step 3
Test Data	[Input data]
Expected Result	[What should happen]
Actual Result	[Fill during execution]
Status	Pending / Pass / Fail
Comments	[Any notes]

4.2 Authentication Test Cases

TC-AUTH-001: User Registration

Test Case ID	TC-AUTH-001
Test Title	Verify user can register with valid data
Preconditions	User is on registration page
Test Steps	1. Enter valid username 2. Enter valid email 3. Enter valid password 4. Confirm password 5. Click Register button
Expected Result	User is registered and redirected to login
Status	Pending

TC-AUTH-002: User Login

Test Case ID	TC-AUTH-002
Test Title	Verify user can login with valid credentials
Preconditions	User is registered
Test Steps	1. Enter valid email 2. Enter valid password 3. Click Login button
Expected Result	User is logged in and redirected to dashboard
Status	Pending

4.3 [Feature Name] Test Cases

[Add more test cases following the template above]

5 Bug Report Template

Bug ID	BUG-001
Title	[Brief description]
Reported By	[Name]
Date	[Date]
Severity	Critical / High / Medium / Low
Priority	High / Medium / Low
Status	New / In Progress / Fixed / Verified / Closed
Environment	[Browser, OS, etc.]
Steps to Reproduce	1. Step 1 2. Step 2 3. Step 3
Expected Behavior	[What should happen]
Actual Behavior	[What actually happens]
Screenshots	[Attach if applicable]
Assigned To	[Developer name]

6 Test Schedule

Phase	Start Date	End Date	Responsible
Test Planning	[date]	[date]	QA Lead
Test Case Design	[date]	[date]	QA Team
Unit Testing	[date]	[date]	Developers
Integration Testing	[date]	[date]	QA Team
System Testing	[date]	[date]	QA Team
UAT	[date]	[date]	Stakeholders

7 Test Metrics

7.1 Key Metrics to Track

- Test Case Pass Rate = (Passed / Total) × 100
- Defect Density = Defects / Lines of Code
- Test Coverage = (Tested Requirements / Total Requirements) × 100
- Defect Leakage = Defects found after release

7.2 Test Summary Report Template

Metric	Value
Total Test Cases	[number]
Passed	[number]
Failed	[number]
Blocked	[number]
Not Executed	[number]
Pass Rate	[percentage]%
Total Bugs Found	[number]
Critical Bugs	[number]

8 Exit Criteria

Testing will be considered complete when:

- All planned test cases have been executed
- Test pass rate is at least 95%
- No critical or high-severity bugs remain open
- All medium bugs have been reviewed and accepted
- UAT sign-off is obtained

9 Risks and Mitigation

Risk	Impact	Mitigation
Insufficient testing time	High	Prioritize critical tests
Environment unavailability	Medium	Set up backup environment
Incomplete requirements	High	Clarify with stakeholders early

10 Approval

Role	Name	Signature/Date
QA Lead		
Project Supervisor		